

# NASA TECH BRIEF

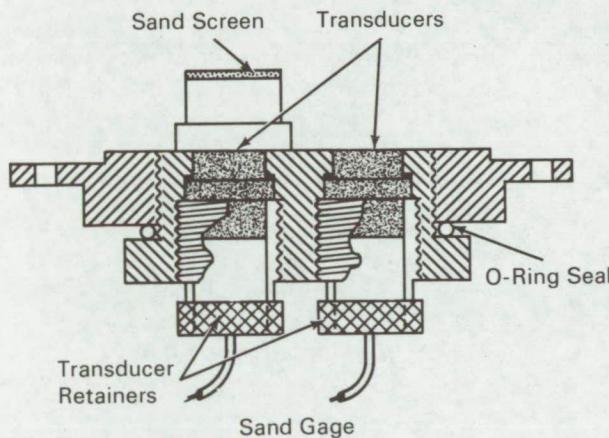


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## Gage for Measuring Coastal Erosion and Sedimentation

Laboratory tests with sand and water in a small tank have shown that underwater sand heights up to 12 inches can be measured (90% accuracy) with an underwater sand height gage comprised of two standard flush-diaphragm pressure transducers. One trans-

ducer is screened with fine wire mesh. When the gage is buried under sand-water mixtures, its diaphragm senses only the water pressure. The other transducer is unscreened and senses water pressure plus the pressure of the accumulated sand. The difference in the



ducer is screened with fine wire mesh. When the gage is buried under sand-water mixtures, its diaphragm senses only the water pressure. The other transducer is unscreened and senses water pressure plus the pressure of the accumulated sand. The difference in the

pressures detected by the transducers is proportional to the sand height. The pressure difference could be recorded with a single trace by paralleling the output leads with opposing polarities to cancel the common mode water pressure.

A direct application of the gage, with several modifications, is the measurement of sand build-up in coastal erosion and sedimentation studies. Tests indicate that the gage was very sensitive to buried water heights, and could also be useful as a research tool in the study of wet earth and landslide phenomena.

### Note

Requests for further information may be directed to:  
 Technology Utilization Officer  
 Langley Research Center  
 Hampton, Virginia 23365  
 Reference: TSP70-10629

### Patent status:

No patent action is contemplated NASA.

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